Nuclear

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October 19, 1989

Mr. William T. Russell, Administrator
Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Dear Mr. Russell:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Reactor Operator (RO) and Senior Reactor Operator (SRO)
Written Examination Comments

Enclosed with this letter are GPUN comments on the RO and SRO exams administered by the NRC on October 11, 1989. The comments are in the format suggested by Examiner Standard 201 in NUREG 1021, Revision 5.

If there are any questions concerning these comments, please call Mr. Herbert Tritt, Operator Training Supervisor at (609)971-4204.

Very truly yours,

E.E. Fitzpatrick
Vice President and Director
Oyster Creek

EEF/MH/jc
Enclosure
cc: Mr. Sadanandan Pullani, Chief Examiner
Operations Branch, Division of Reactor Safety
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U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

NRC Resident Inspector
Oyster Creek Nuclear Generating Station

FACILITY COMMENTS

Category 2

EMERGENCY AND ABNORMAL PLANT EVOLUTIONS
(36%)

QUESTION: 04 (2.50)

EMG-3200.01, "RPV Control Power," directs you to reset Alternate Rod Insertion (ARI) if reactor power is above 2% or cannot be determined AND insert control rods with one of several methods. List FIVE (5) of these methods.

ANSWER: 04 (2.50)

1. de-energize scram solenoids
2. vent the scram air header
3. manually scram
4. open individual scram test switch
5. increase CRD cooling water differential
6. drive control rods by increasing the CRD drive water differential pressure
7. vent control rods drive over piston volume

Any five (5) [+0.5] each

REFERENCE:

1. OCNGS: SBEOPs, Lesson Plan 845.05, L.O. #I.A.
2. OCNGS: EMG-3200.01, "RPV Control PoweR," pp. 63 and 64.
3. KA Numbers 295015K201 (3.8), 295015K204 (4.0), and 295015K207 (3.3)

295015K201 295015K204 29515K207 ..(KA's)

FACILITY COMMENT:

There are multiple methods of de-energizing scram solenoids (given below) and each method should be accepted as a correct answer.

(1) Open 100 amp breakers

(2) Pull fuses

(3) Operate subchannel test switches

FACILITY JUSTIFICATION:

EMG-3200.01, "RPV Control Power," pp. 63 and 64

EMERGENCY AND ABNORMAL PLANT EVOLUTIONS
(36%)

QUESTION: 07 (1.50)

For each of the action/conditions listed in Column I, SELECT the CORRECT reactor pressure setpoint from Column II. The responses given in Column II may be used once, more than once, or not at all.

COLUMN I (Action/Conditions)			COLUMN II (Setpoint)
a. Reactor scram	____	1.	1020 psig
b. ATWS trip for RR pump	____	2.	1030 psig
c. opening setpoint for EMRV NR108A and D	____	3.	1040 psig
	____	4.	1050 psig
d. opening setpoint for EMRV NR108B C and E	____	5.	1060 psig
e. reactor hi pressure alarm	____	6.	1070 psig
	____	7.	1080 psig

ANSWER: 07 (1.50)

a. 4
b. 5
c. 5
d. 7
e. 3

[+0.3] each

REFERENCE:

1. OCNGS: Lesson Plan 828.05, L.O. #I.C and 828.55, L.O. #I.B.2.
2. OCNGS: OPM, Module 05, p. 05-16.
3. OCNGS: OPM, Module 55, Table 55-3.
4. KA Numbers 295025K201 (4.1) and 295025K204 (3.9).

295025K204 295025K201 ..(KA's)

EMERGENCY AND ABNORMAL PLANT EVOLUTIONS
(36%)

FACILITY COMMENT:

For Part b, ATWS trip for RR Pump, should accept either 4 or 5 because the Tech. Spec. value is 1060 but the actual is 1050 per Standing Orders.

FACILITY JUSTIFICATION:

OCNGS: Standing Order #1

EMERGENCY AND ABNORMAL PLANT EVOLUTIONS
(36%)

QUESTION: 18 (2.00)

Concerning the Reactor Building Heating and Ventilation (RBHVAC) System, STATE SIX (6) conditions and their setpoints which cause the Reactor Building supply fans (SF-1-12, 13, and 14) to trip. (Time delays are not required.)

ANSWER: 18 (2.00)

1. Rx Op. Floor high radiation - 70 mR/hr. or (B-9)
2. Fuel pool area high radiation - 70 mR/hr. or (C-9)
3. RB ventilation exhaust high radiation - 13 mR/hr.
4. Lo-Lo water level - 86" TAF. or (90")
5. High DW pressure - 3.0#. or (3.5 psig)
6. RB high pressure - 1" H_2O
7. Either V-28-21 or V-28-22 not full open.
8. High temperature in ventilation duct.

Any six (6) [+0.33] each

REFERENCE:

1. OCNGS: Lesson Plan 828.42, "Secondary Containment and SBGTS, p. 15, L.O. #I.F.
2. KA Numbers 295032K202 (3.6)

295032K202 ..(KA's)

FACILITY COMMENT:

Should accept 2.9# for High D/W pressure per Standing Orders.

FACILITY JUSTIFICATION:

OCNGS: Standing Order #1

FACILITY COMMENTS

Category 3

PLANT SYSTEMS (51%) AND PLANT-WIDE GENERIC RESPONSIBILITIES (13%)

QUESTION: 02 (2.00)

Column I lists the mode selections available for Containment Spray Mode Selector Switch. Using the attached drawing (Attachment I) as a reference, MATCH the condition/valve arrangement listed under Column II with its associated Mode. NOTE: Valve arrangements/ conditions listed in Column II may be used once, more than once, or not at all. (2.0)

COLUMN I (Mode)		COLUMN II (Valve Arrangement)
a.	DYNAMIC TEST I	1. V-21-11 and -18 close, V-21-17 valve opens and places loop II in the automatic Mode.
b.	AUTO I	
c.	AUTO II	2. V-21-1, -3, -5, and -15 close, valves V-21-13 and V-6-27 open and places loop II in the automatic Mode.
d.	DYNAMIC TEST II	
		3. V-21-5 and -15 close, valves V-21-1, -3, and -13 open and places loop I in the automatic Mode.
		4. V-21-1, -3, -5, -7, -9 and -11 open, V-21-13, -14, -17 and -18 close, allowing containment spray pumps A & C to start automatically.
		5. V-21-5, -15, and -13 close, valves V-21-11, and -18 and -17 open and places loop I in the automatic Mode.
		6. V-21-7, -9, -11, and -18 close, valves V-21-17 and V-6-26 open and places loop II in the automatic Mode.

ANSWER: 02 (2.00)

a. 1
b. 4
c. 4
d. 3

[+.5] each

REFERENCE:

1. OCNGS: Lesson Plan 828.09, L.O. #I.D.
2. OCNGS: OPM Module 09, pp 09-13 and 14, OPM 09, Fig. 9-1
3. KA Numbers 219000A101 (4.0), 219000K402 (3.5).

219000A101 219000K402 ..(KA's)

FACILITY COMMENT:

V-21-14 in answer No. 4 should be changed to V-21-15 to agree with drawing.
No action required

FACILITY JUSTIFICATION:

Exam drawing.

PLANT SYSTEMS (51%) AND PLANT-WIDE GENERIC RESPONSIBILITIES (13%)

QUESTION: 03 (1.50)

With the plant in shutdown cooling, STATE three (3) conditions which will result in automatic closure of the shutdown cooling system inlet and outlet valves. Setpoints ARE required.

ANSWER: 03 (1.50)

1. Low-Low reactor water level [+0.25], +86 inches TAF [+0.25].

2. Recirculation loop suction temperature [+0.25], greater than or equal to 350 deg F [+0.25].

3. High drywell pressure [+0.25], 3.5 psig [+0.25].

REFERENCE:

1. OCNGS: Lesson Plan 828.45, L.O. #I.E.
2. OCNGS: OPM, Module 45, pp 45-11
3. KA Numbers 205000K401 (3.4), 205000K402 (3.7), 205000K403 (3.8).

205000K402 205000K401 205000K403 ..(KA's)

FACILITY COMMENT:

Should accept 2.9# for High D/W pressure per Standing Orders. In addition to Tech. Spec. value at 3.5#.

FACILITY JUSTIFICATION:

OCNGS: Standing Order #1.

PLANT SYSTEMS (51%) AND PLANT-WIDE GENERIC RESPONSIBILITIES (13%)

QUESTION: 05 (3.00)

Answer the following questions concerning the Automatic Depressurization System (ADS).

a. STATE the conditions (four (4) required), including setpoints, for initiation of ADS. (2.0)

b. ALL ADS logic has been established, the timers still have 25 seconds before timing out, when EMRV NR108A opens due to high pressure. SELECT the one (1) response that correctly describes the response of the ADS system. (1.0)

1. NR108A is sealed open, the rest of the ADS valves function normally.

2. NR108A cycles on pressure, ADS vlaves function normally.

3. NR108A and NR2108B seal open, the rest of the ADS valves function normally.

4. NR108A and NR2108D seal open, the rest of the ADS valves function normally.

ANSWER: 05 (3.00)

a. 1. High drywell pressure [+0.25] of 3.0 psig [+0.25].
2. Low-Low-Low water level [+0.25] of 63.5 inches TAF [+0.25].
3. Core Spray Booster pump running [+0.25] of 50 psid [+0.25].
4. Times out [+0.25] 2 minutes [+0.25].

b. 3. [+1.0]

REFERENCE:

1. OCNGS: Lesson Plan 828.05, L.O. #I.C.
2. OCNGS: OPM, Module 05, pp 05-17 and 05-20.
3. KA Numbers 218000K403 (3.8)

218000K403 ..(KA's)

PLANT SYSTEMS (51%) AND PLANT-WIDE GENERIC RESPONSIBILITIES (13%)

FACILITY COMMENTS:

a. Should accept 2.9# per Standing Orders or 3.5# per Tech. Spec. for High D/W pressure.

Should accept 56" Tech. Spec. or 64.6" per Standing Order in addition to 63.5" which was used in previous questions.

b. Should accept 4 also since NR108D opens at 1060 also and NR108B opening is a normal ADS function.

FACILITY JUSTIFICATION:

a. OCNGS: Standing Order #1.
b. OCNGS: License and Technical Specifications
c. OPM, Module 05

EMERGENCY AND ABNORMAL PLANT EVOLUTIONS
(36%)

QUESTION: 06 (2.00)

Oyster Creek is operating at 90% power with the feedwater level control system in three (3) element control when one of the steam flow transmitter inputs fails to zero (0). Column I list various parameters that may be affected. Column II lists the steady state effect on the parameter due to the failure. For each parameter in Column I SELECT the final steady state effect from Column II. The responses from Column II may be used once, more than once, or not at all. (ASSUME no operator action.).

COLUMN I (Parameters)		COLUMN II (Steady State Effect))
a. reactor feed flow	____	1. Increase
b. reactor water level	____	2. Decrease
c. reactor power	____	3. Remain the same
d. reactor pressure	____	

ANSWER: 06 (2.00)

a. 2
b. 2
c. 3
d. 3

[+0.5] each

REFERENCE:

1. OCNGS: Lesson Plan 828.18, L.O. #I.F.b.
2. OCNGS: OPM, Module 18, p. 18-23.
3. KA Numbers 295009K202 (3.9) and 295009A202 (3.6).

295009K202 295009K202 ..(KA's)

FACILITY COMMENT:

Should accept either 2 or 3 for Reactor Power (c) since there will be some decrease in power due to less inlet subcooling but may not be noticeable on instrumentation.

FACILITY JUSTIFICATION:

1. Lesson Plant 828.18, L.O. #I.F.b
2. OPM, Module 18, p. 18-23.

QUESTION: 11 (3.00)

Answer the following questions concerning the Isolation Condenser System:

a. From the fol' wing responses SELECT the ONE (1) response that contains the correct parameters and setpoints that will cause an automatic initiation of the Isolation Condenser System. (1.0)

1. Reactor Pressure 1050 or Reactor Level 86" TAF

2. Reactor Pressure 1060 or Reactor Level 86" TAF

3. Reactor Pressure 1050 or Reactor Level 63.5" TAF

4. Reactor Pressure 1060 or Reactor Level 63.5" TAF

b. Once an initiation signal for the Isolation Condenser System is present, how much of a time delay will exist before the system will begin to initiate: (SELECT the correct answer). (1.0)

1. .5 seconds

2. 1 second

3. 1.5 seconds

4. 2 seconds

c. During manual operation of the isolation condenser system, reactor cooldown rate is controlled by: (SELECT the correct answer). (1.0)

1. Cycling the isolation condenser steam supply valves.

2. Shutting recirculation loop discharge valves, throttling discharge bypass valve position.

3. Cycling AC condensate return valves.

4. Cycling DC condensate return valves.

PLANT SYSTEMS (51%) AND PLANT-WIDE GENERIC
RESPONSIBILITIES (13%)

ANSWER: 11 (3.00)

a. 2. [+1.0]

b. 3. [+1.0]

c. 4. [+1.0]

REFERENCE:

1. OCNGS: Lesson Plan 828.23, L.O. #I.C, I.E, and I.O.
2. OCNGS: OPM, Module 23, pp 23-18, 23-26, 23-27, and 23-40.
3. KA Numbers 207000K401 (4.3), 207000K509 (3.7).

207000K401 207000K509 ..(KA's)

FACILITY COMMENT:

a. Should accept either 1 or 2 since 1050# is the actual setpoint and 1060# is the Tech. Spec. setpoint, for high pressure Isolation Condenser initiation.

FACILITY JUSTIFICATION:

OCNGS: Standing Order #1.
OCNGS License and Technical Specification

PLANT SYSTEMS (51%) AND PLANT-WIDE GENERIC RESPONSIBILITIES (13%)

QUESTION: 16 (1.00)

SELECT the ONE (1) response that CORRECTLY describes the results of overcharging a Hydraulic Control Unit (HCU) nitrogen accumulator. (1.0)

a. Control rod insertion speed is excessive during a scram.

b. Accumulator will not provide motive force to insert control rod during a scram.

c. HCU accumulator high pressure alarm is received.

d. CRDM may be damaged, during a scram, due to high differential pressure.

ANSWER: 16 (1.00)

b. [+1.0]

REFERENCE:

1. OCNGS: Lesson Plan 828.11, L.O. #I.J
2. OCNGS: OPM, Module 11, pp 11-53
3. KA Numbers 201001A106 (3.4)

201001K106 ..(KA's)

FACILITY COMMENT:

Should accept either b or d because the GE Tech. Manual refers to possible CRDM damage in addition to loss of motive force.

FACILITY JUSTIFICATION:

GE 1-92807A CRDM Tech. Manual (page attached)

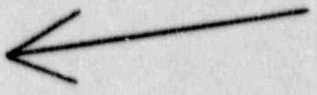
n. Check the cap on connector P6 for leakage; verify that the cap is tight.

o. Fully close the isolation valve (107) in the accumulator water drain line.

p. Carefully open the charging water riser isolation valve until the piston in the water accumulator compresses the gas charge to double the value of the N_2 precharge pressure determined in step j. above as shown on pressure indicator 131.

CAUTION

After approximately 30 minutes, recheck the pressure shown on pressure indicator 131 and verify that it remains constant after the nitrogen has cooled. If, after this interval, pressure exceeds the value recorded in step p., loosen the cap on connector P6 and bleed excess pressure until pressure indicator 131 shows the pressure recorded in step p. Excess accumulator pressure could result in internal CRD damage in the event of a reactor scram.



3-16. PURGING AIR FROM WATER ACCUMULATOR

3-17. The following procedure may be used to purge air from the scram water accumulator (125) prior to connecting the HCU to the CRDHS. With the inlet and outlet scram valves open and all manual isolation valves in the HCU closed, proceed as follows:

a. Open the CRDHS vent valve in the line to the CRD under-piston port.

b. Open the isolation valve (101) in the insert riser.

c. With a technician observing the outlet of the CRDHS vent valve opened in step a. above, carefully open the isolation valve (104) in the cooling water riser.

d. When all air has vented through the CRDHS vent valve opened in step a., close the vent valve.

e. Close the isolation valve (104) in the cooling water riser.

f. Close the isolation valve (101) in the insert riser.

3-18. CLOSING SCRAM VALVES

3-19. With all manual isolation valves in the HCU closed, proceed as follows to close the inlet and outlet scram valves (126, 127):

a. Fully open the isolation valve (116) in the scram valve pilot air line.

b. At the RPS operations and test panel in the control room, close the appropriate toggle switch to apply power to the scram pilot air valves (117, 118).

c. Verify that the solenoids of valves 117 and 118 function normally, without chatter or abnormal buzzing.

d. Simultaneous with the performance of steps b. and c., observe the stem travel indicators on the inlet and outlet scram valves and verify that the valves are fully closed.

e. In the control room, verify that the SCRAM indication on the particular rod status display has extinguished (indicating that the position switches on the inlet and outlet scram valves are functioning properly).

FACILITY COMMENTS

CATEGORY 5

5. EMERGENCY AND ABNORMAL PLANT EVOLUTIONS

QUESTION 5.01 (3.00)

MATCH the immediate effect of a total loss of instrument air during power operations on the following valves:

VALVES		EFFECT
1. feedwater control valves (1D11A, 1D11B, 1D11C)	___ (0.5)	a. fail as-is
2. CRD flow control valves (V-15-128, V-15-129)	___ (0.5)	b. fail open
3. standby gas treatment inlet and outlet valves (V-28-23), 26, 27, and 30)	___ (0.5)	c. fail closed
4. offgas inlet to SJAE (V-7-17 through V-7-28)	___ (0.5)	d. no effect (i.e. no failure)
5. offgas valve from condenser (V-7-1 through V-7-6)	___ (0.5)	
6. reactor building vacuum breaker valves (V-28-16, V-28-18)	___ (0.5)	

ANSWER 5.01 (3.00)

(0.5 each)

1. a
2. c
3. a
4. b
5. c
6. a

REFERENCE

1. Oyster Creek: 2000-ABN-3200.35, TABLE 1

2. Oyster Creek: TCR 828.43, Behavioral Learning Objective K.

KA 295019AK201(3.9) 295019AK203(3.3) 295019AK212(3.4) 295019AK206(2.9) 295019AK209(3.3)
295019K212 295019K209 295019K206 295019K203 295019K201
..(KA's)

FACILITY COMMENT:

For the Reactor Building Vacuum Breaker Valves, (6.) should accept a or b since the valves do have accumulators, but the ABN-3200.35 states that the valves fail open.

FACILITY JUSTIFICATION:

ABN-3200.35, "Loss of Instrument Air", Table 1.

5. EMERGENCY AND ABNORMAL PLANT EVOLUTIONS

QUESTION 5.03 (3.00)

The plant is at 100% power when a total loss of 125 VDC power occurs.

For each of the components listed below, MATCH the correct consequence.

COMPONENTS		CONSEQUENCES
1. Shutdown Cooling System DC isolation valves	___ (0.5)	a. Loss of position indication only
2. Main Steam Isolation Valves	___ (0.5)	b. Loss of position indication and reset capability only
3. Isolation Condenser DC isolation valves	___ (0.5)	c. Loss of position indication, reset capability and control power
4. 4160V and 460V breakers	___ (0.5)	d. Loss of control power and reset capability only
5. EMRVs	___ (0.5)	e. Loss of control power only
6. Drywell isolation valves	___ (0.5)	f. Loss of reset capability only
		g. Loss of position indication and control power only

ANSWER 5.03 (3.00)

(0.5 each)

1. g
2. b
3. c
4. e
5. e
6. f

REFERENCE

Oyster Creek, 2000-ABN-3200.13, Rev. 7, 06/10/88: Response to Loss of All 125 VDC, Pgs. 1-4.

LO TCR 828.12 I,J

KA 262002K108(3.1) 262002K116(3.2)
295004AK203(3.3)
295004K203 262002K116 262002K108 ..(KA's)

FACILITY COMMENT:

(4.) should accept e or g since some of the 460V and 4160V breakers do lose position indication in addition to reset capability.

(5.) should accept e or g since the red and green indicating lights are DC powered while the acoustic monitors are not.

(6.) should accept b or f since the DC isolation valves will lose position indication.

FACILITY JUSTIFICATION:

(4.) print BR-DW6-E1122

(5.) ADS elementary GE 729E182

(6.) print BR E1184

QUESTION 5.06 (1.00)

The reactor is operating at 60% power when condenser vacuum low annunciator (Q-3-c) alarms. Condenser vacuum is 24.0 in. Hg vac. and decreasing slowly.

Per ABN-3200.14, "Loss of Condenser Vacuum", WHAT action should be taken as a result of decreasing vacuum?

(1.00)

a. Scram the reactor

b. Reduce power to prevent a scram

c. Trip the main turbine

d. Confirm reactor scram and main turbine trip

ANSWER 5.06 (1.00)

b (1.00)

REFERENCE

ABN-3200.14, Pg. 3

LO TCR 828.26 F

KA 295002K309(3.2) 295002K302(3.4) 295002K103(3.8) 295002K201(3.5) 295002K202(3.2)

295002K103 295002K302 295002K309 295002K201 295002K202 ..(KA's)

FACILITY COMMENTS:

Should accept (a) or (b) since 24" is close to the scram setpoint of 23". Some operators may pick (a) per the 106 Procedure which states a manual scram may be inserted when verified operating parameters are trending such that an automatic scram is imminent or inevitable.

FACILITY JUSTIFICATION:

Section 4.2.3 of Administrative Procedure 106.

QUESTION 5.08 (1.00)

If alarm 3-4-e, "BUS 1A UV", activates and the undervoltage trip on feeder breaker 1A1P fails, then Emergency Diesel Generator #1: (1.00)
(CHOOSE ONE)

a. may overload during the fast start sequence

b. will automatically start and idle at 450 rpm

c. may need to be manually started and idled at 450 rpm

d. will not function properly due to being paralleled with an unstable grid

ANSWER 5.08 (1.00)

a (1.00)

REFERENCE

OCNGS OPM 16B, Rev. 0, 03/27/87, p. 16B-9, Fig. 16B-1A, TABLE 16A-2

KA 295003K102(3.4)
295003K102 ..(KA's)

FACILITY COMMENT:

Question refers to automatic operation of EDG #1 in reference to 4160V 1A undervoltage condition with subsequent failure of 1A1P breaker to trip. Answer (a) is correct based on this condition, however breaker 1A1M is designed to also trip on an undervoltage condition thereby shedding loads. Given this confusion factor, neither (a) nor (b) is totally correct. However, credit should be given for (b) as EDG will automatically start.

FACILITY JUSTIFICATION:

RAP U-1-a

QUESTION 5.14 (1.00)

During a reactor startup an unexplained increase in reactor power occurs such that the reactor is now operating in Region 2 of the attached Figure 202.1-4, "Oyster Creek Operating Power/Flow Map". In accordance with procedure 2000-ABN-3200.07, "Unexplained Reactivity Change", which one of the following actions should be taken immediately? (1.00)

a. insert control rods in reverse order and bring the reactor subcritical

b. insert control rods (CRAM array) to reduce power to below the 80% rod line

c. manually scram the reactor

d. reduce recirculation flow to reduce power to below the 80% rod line

ANSWER 5.14 (1.00)

b (1.00)

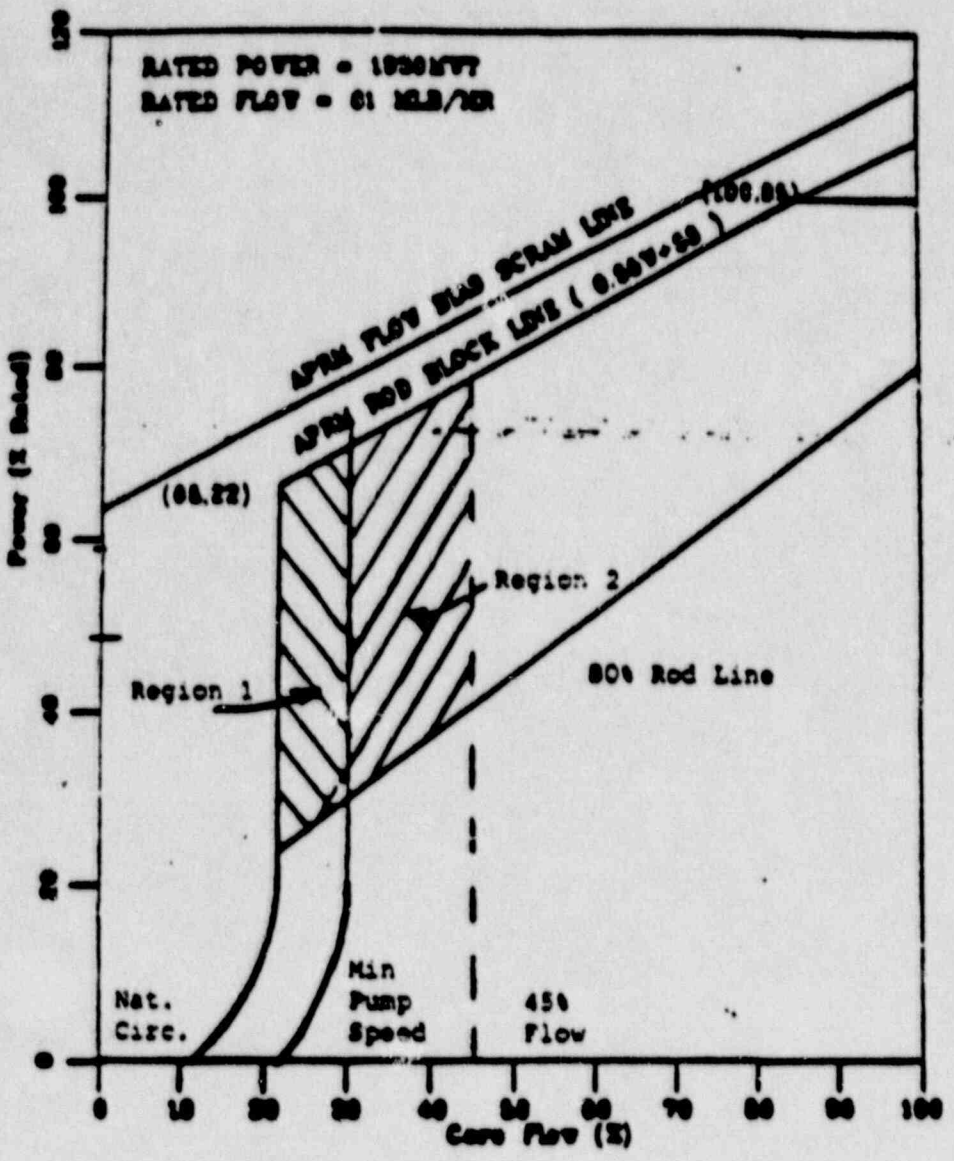
REFERENCE

OCNGS 2000-ABN-3200.07, Rev. 2, 03/24/89, p. 5.0

OCNGS TCR 801.01, I.A.5

KA 295014AK106(3.9)
295014K106 ..(KA's)

Figure 202.1-4



Oyster Creek Operating Power/Flow Map

FACILITY COMMENT:

Should accept answers b or c, since 2000-ABN-3200.07 does state that if you enter region 2 of the attached curve, you should insert the cram rods to reduce power below the 80% rod line. It would be impossible to be in region 2 in the Startup Mode without a Tech Spec violation. Maximum power in range 9 is 12% and minimum flow in range 10 is 65%.

FACILITY JUSTIFICATION:

2000-ABN-3200.07, "Unexplained Reactivity Change"

QUESTION 5.17 (1.50)

Emergency Operating Procedure EMG-3200.09, "Level/Power Control", in step LP-2, requires bypassing the MSIV low-low RPV water level isolation interlock. In accordance with Procedure 312.1, "Bypassing Isolation Interlocks and Automatic Scram During Emergency conditions", what three (3) specific precautions/limitations are applicable to bypassing ONLY this signal (containment flooding is not required)?
(i.e., Under what three (3) conditions should you NOT bypass the MSIV low-low RPV water level isolation interlock?)

(1.50)

ANSWER 5.17 (1.50)

1. No indication of gross fuel failure (0.50)
2. No indication of steam line break exists (0.50)
3. Main condenser is available (0.50)

REFERENCE

OCNGS TCR 845.02 I.B

OCNGS SBEOP EMG-3200.09, Rev. 2, 01/31/89, Step LP-2

OCNGS Procedure 312.1, Rev. 7, 05/06/89, Pg. 7.0

KA 295037G003(4.3)
295037G003 ..(KA's)

FACILITY COMMENTS:

Since we do not require operators to memorize specific precautions/limitations, should accept any answer consistent with intent of precaution.

Example: Gross fuel failure-accept high radiation conditions.

FACILITY JUSTIFICATION:

OCNGS TCR 845.02 I.B

QUESTION 5.20 (1.00)

In accordance with Emergency Plan Implementing Procedure 9473-IMP-1300.33, "Core Damage Estimation" which of the following methods of core damage estimation is preferred if the Drywell air PASS sample is not available and drywell venting has been performed in accordance with the EOPs?
(1.00)

a. Computer routine "EPIP-33"

b. Hydrogen concentration in containment

c. Containment High-Range Radiation Monitor system

d. Off-Gas System activity

ANSWER 5.20 (1.00)

b (1.00)

REFERENCE

OCNGS EPIP 9473-IMP-1300.33, Rev. 3, 01/26/89, pp. 4.0-5.0 and 12.0-14.0

KA 295038EA204(4.5)

295038A204 ..(KA's)

FACILITY COMMENT:

We do not require candidates to memorize actions in 9473-IMP-1300.33. Should accept b or c since both of these methods are discussed in the procedure.

FACILITY JUSTIFICATION:

OCNGS TCR 0623.2685/780.0.0001, BLO K (attached)
9473-IMP-1300.33, "Core Damage Estimation"

GPU Nuclear — **Training Content Record - OC**

Program Title: EMERGENCY PREPAREDNESS TRAINING	Number: 30857 7832-PGM-2685	Rev.: 2
Course Title: EMERGENCY DIRECTION/ EMERGENCY SUPPORT DIRECTION	Number: 30857800 0623.2685/780.0	Rev.: 0
Lesson Title: EMERGENCY DIRECTION/EMERGENCY SUPPORT DIRECTION FOR LICENSED OPERATORS	Number: 308578000001 .01	Rev.: 1

I. PURPOSE/SCOPE:

To provide the Emergency Director/Emergency Support Director and their respective key staffs with the purpose and concepts of the Oyster Creek Nuclear Generating Station's Emergency Plan, its implementation, and the achievement of its objectives through Emergency Management, Direction and Coordination of GPU Nuclear Emergency Organization.

II. BEHAVIORAL LEARNING OBJECTIVES:

At the completion of this session of training using only the lesson materials provided, the trainee will be required to demonstrate and have the ability (in writing or by practical application) to complete the items listed below:

A. State and explain the responsibilities of the Emergency Director and Emergency Support Director.

B. Describe the responsibilities and authority of the ED/ESD to the various Local, State, and Federal Agencies.

C. State the concept of operations for responding to an emergency with the on-shift organization.

D. State the concept of operations when going from the on-shift to the Initial Response Emergency Organization.

Responsibility		Signature	Title	Date
Origination		J Blount	Lead Emer. Planner	3/31/88
Review/Concurrence				
Approval	Objectives	R F Sullivan	Emer. Preparedness Mgr	3/31/88
	Final	Jack Williams	Support Training Mgr.	3/31/88

II. BEHAVIORAL LEARNING OBJECTIVES: (Continued)

E. Describe the transfer of authority schemes as the offsite facilities are activated.

F. Describe the functions of the emergency facilities, state the emergency levels at which the various facilities must be activated and their location, and state the timing sequence for manning the onsite and offsite emergency facilities.

G. Define the Emergency Planning Zones and discuss their purpose.

H. Define the Protective Action Guides (PAG).

I. Define the Protective Action Recommendation (PARs) and the criteria for each.

J. Explain the basic concepts involved in making dose assessments and dose projections.

K. Explain in general terms the contents and uses of EPIP's 1, 2, and 3.

L. Explain which procedures are used to accomplish Initial Procedures, Callout of Duty Roster Personnel, Event Reporting, Logkeeping, and Reporting Telephone Trouble.

M. Explain the concept and operation of Pagers.

N. Explain the concept and operation of the Emergency Telephone System.

O. Explain the method used to handle citizen inquiries on inadvertent site activations.

III. REFERENCES:

A. GPUN Emergency Plan

B. Emergency Plan Implementing Procedures

C. Station Procedure 126

III. REFERENCES: (Continued)

D. NUREG 0654

E. NUREG 0696

F. NUREG 0728

G. EPA PAG Manual

H. 10 CFR 50

I. NUREG 0396

IV. DURATION:

Four (4) hours approximately.

QUESTION 5.21 (3.00)

COMPLETE the following in accordance with EPIP 9473-IMP-1300.01, "Classification of Emergency Conditions": (include units where applicable)

The fuel cladding integrity shall be considered breached if coolant activity exceeds _____ (a) or, Off-gas discharge indicates greater than _____ (b) (0.5) (0.5)

The RCS boundary shall be considered breached if there is confirmed leakage from the R.C.S. in excess of _____ (c) (0.5)

The Primary Containment shall be considered breached if any of the following conditions exist during an accident sequence:

Unexplained rapid decrease in _____ (d) (0.5)

(exceeds makeup capacity) -or-

Unexplained increase in _____ (e) in more than (0.5)
one area with known or suspected leakage from Primary Containment -or-

Venting of the _____ (f) is required for accident control (0.5)

ANSWER 5.21 (3.00)

a. 300 uci/ml (0.5)
b. 10,000 mR/Hr (0.5)
c. 50 gpm (0.5)
d. D.W. Pressure (0.5)
e. Secondary containment A.R.M.s (0.5)
f. D.W. (0.5)

REFERENCE

OCNGS EPIP 9473-IMP1300.01, Rev. 5, 12/17/88, pp. 3.0-4.0

KA 295038EK205(4.7)

295038K205 ..(KA's)

FACILITY COMMENT:

We do not require operators to memorize EPIP's; therefore, should accept terms other than the exact words listed.

Example: Containment vice D/W

FACILITY JUSTIFICATION:

OCNGS TCR 0623.2685/780.0.0001, BLO K

5. EMERGENCY AND ABNORMAL PLANT EVOLUTIONS

QUESTION 5.25 (2.00)

Given the following conditions:

Reactor power is 12%

Reactor Mode Switch is in SHUTDOWN

Recirculation Pumps have tripped

CRD pumps are unavailable

No boron has been injected

ARI has initiated

Scram solenoids are deenergized

Scram air header is vented

Torus water temperature is 115°F

USE the attached copy of EMG-3200.01, "RPV Control - Power" and STATE

a. What step(s) in this procedure is(are) being performed now (1.00)

b. What, if any, immediate actions are required by this procedure (1.00)

ANSWER 5.25 (2.00)

a. RC/Q-5, (0.5 each) RC/Q-6 (or RC/Q 6.1 AND RC/Q 6.2)

b. Initiate liquid poison (0.34)
Prevent automatic initiation of ADS (0.33)
Reset ARI (0.33)

REFERENCE

OCNGS TCR 845.05, I.A

OCNGS EOP EMG-3200.01, "RPV Control - Power", Rev. 4, 01/31/89

KA 295037G012(4.6)
295037G012 ..(KA's)

FACILITY COMMENT:

Some candidates answered both parts a and b in part a and should be given appropriate credit. They gave other administrative requirements in part b (i.e., Alert Notifications, etc.) and should not be penalized.

FACILITY JUSTIFICATION:

None needed.

QUESTION 5.31 (2.00)

Using the attached IMP-1300.01, "Classification of Emergency Conditions," Attachment 1, MATCH the correct classifications with each of the following plant conditions or events.

PLANT CONDITION/EVENT		CLASSIFICATION
1. Annunciators J-3-a and J-4-a, "FLOW HI/MN STM LINE AREA TEMP HI-HI I[II]" are alarming. The MSIVs are open.	___(0.5)	a. Not an Emergency Action Level (EAL)
2. Annunciators J-1-b and J-2-b, "RAD HI-HI I[II]" are alarming. The MSIVs are open.	___(0.5)	b. Notification of Unusual Event
3. 24 hours after testing the EMRVs torus water temperature was reduced to 96°F	___(0.5)	c. Alert
		d. Site Area Emergency
4. The reactor mode switch is taken to the "STARTUP" position during a shutdown and a reactor scram occurs.	___(0.5)	e. General Emergency

One candidate requested additional information to answer Parts 1 and 2, such as, whether there was leakage from the RCS and what the power level was. He was informed that there should be adequate information already provided but that if he felt the need to make assumptions he should write them down.

ANSWER 5.31 (2.00)

(0.5 each)

1. d
2. e
3. b
4. a

REFERENCE

1. Oyster Creek: Emergency Plan Implementing Procedure IMP-1300.01, Attachment 1.

KA 294001A116(4.7)
294001A116 ..(KA's)

FACILITY COMMENT:

Since the examiner stated that the candidates could state assumptions if they felt that insufficient information was given. Answers consistent with these assumptions should be given consideration.

FACILITY JUSTIFICATION:

Exam comments.

QUESTION 5.35 (1.00)

In accordance with Abnormal Operating Procedure 2000-ABN-3200.22, "AOG Building Loss of Power", you are cautioned NOT to restore power to MCC-1E13 or MCC-1E14 at USS-1E1 if USS-1E1 was deenergized for more than 6 hours. The basis for this caution is: (1.00)

a. to prevent the spread of airborne radiation to other areas due to the automatic restart of the ventilation system

b. to allow the ventilation system time to clear the building of any hydrogen

c. to prevent an explosion due to a potential combustible gas mixture being present

d. to allow time to restart the ventilation radiation monitor pump before restarting the ventilation system

ANSWER 5.35 (1.00)

c (1.00)

REFERENCE

OCNGS TCR 801.01, I.C, Lesson 801.01 p. 42

OCNGS 2000-ABN-3200.22, Rev. 4, 05/28/89, p. 6.0

KA 294001K115(3.8)
294001K115 ..(KA's)

FACILITY COMMENT:

Should accept a or b since Procedure 2000-ABN-3200.22, "AOG Building Loss of Power" addresses both of these concerns.

FACILITY JUSTIFICATION:

2000-ABN-3200.22, "AOG Building Loss of Power", Sec. 3.7.

FACILITY COMMENTS

CATEGORY 6

QUESTION 6.09 (2.00)

MATCH the following conditions with the correct and most severe automatic action. Severity increases from a. to e. No instruments are bypassed.

CONDITIONS		AUTOMATIC ACTIONS	(severity)
1. Reactor Mode - STARTUP 3 SRMs not fully inserted Count Rate - 50 CPS Non-coincidence jumpers installed	(0.5)	a. None	(least)
		b. Alarm	
		c. Rod Block	
2. Reactor Mode - REFUEL All SRMs fully inserted Count Rate - 10 CPS Non-coincidence jumpers installed An IRM mode switch is taken to STANDBY	(0.5)	d. Half-Scram	
		e. Scram	(most)
3. Reactor Mode - STARTUP IRMs on Range 8 No SRM is fully inserted One SRM is reading 0 CPS Non-coincidence jumpers installed	(0.5)		
4. Reactor Mode - RUN Power - 10% All SRMs are fully withdrawn Non-coincidence jumpers installed One SRM period meter is reading 25 seconds	(0.5)		

ANSWER 6.09 (2.00)

(0.5 each)

1. c
2. d
3. b
4. a

REFERENCE

OCNGS TCR 828.29 I.B, I.E

OCNGS OPM 29B SRM, OPM 29C IRM

KA 215003K101(3.9) 215003A103(3.7) 215004K102(3.4) 215004A105(3.8)

215003A103 215004K102 215004A105 215003K101 ..(KA's)

FACILITY COMMENT:

For Part 4, should accept a or b because the alarm is not bypassed in "RUN" even though the OPM module does state that it is bypassed.

FACILITY JUSTIFICATION:

Alarm Response Procedure, 6-7-D

6. PLANT SYSTEMS AND PLANT-WIDE GENERIC RESPONSIBILITIES

QUESTION 6.11 (2.00)

With regards to the feedwater control system:

a. State two (2) reasons for having feed pump runout protection. (1.00)

b. State when feed pump runout is reset. (1.00)

ANSWER 6.11 (2.00)

Any 2 of 3 for (a)

a. 1. Protect feed pump from over current (0.5)
2. Protect Cond. Demin. from high D/P (not per procedure)
3. Prevent feedwater pump trip on low suction pressure (0.5)

b. Whenever the FRVs receive a close signal (1.00)

REFERENCE

OCNGS TCR 828.18 I.G

OCNGS OPM 18, Rev. 0, 02/19/87, pp. 18-18, 18-19, "Feedwater Controls"

OCNGS Licensed Operator Exam Bank, Item Code 3-8

KA 259002K410(3.4) 259002K506(2.4) 259001K108(3.7) 259001K405(2.8)
259002K410 259002K506 259001K108 259001K405 ..(KA's)

FACILITY COMMENT:

(b.) should accept actual operation of instrumentation in lieu of "whenever a close signal is received"

FACILITY JUSTIFICATION:

D-308-7K11-146

B. Circuitry Operation

1. Reactor Level Setdown

The signals which initiate the RLS are low reactor water level (137 in. TAF) and a full scram signal. The scram signal comes from new relay 3K10X in the scram reset interrupt circuitry (Fig.1). This closes a contact in the RLS circuit (Fig. 2). The low water level signal comes from a new alarm unit, ID91, which receives a level signal from narrow range GEMAC channels A or B (determined by the selector switch on Panel 4F).

When both signals exist, relays K22 and K22X energize. Contacts from K22 seal in the relays; one bypasses the full scram signal and the other is in the reset circuitry. Reset pushbutton ID35 (to be on Panel 4F below the Master Feedwater Controller) illuminates and an alarm sounds on Annunciator H (H-7-f, "RX LVL SETDOWN INITIATED").

Relay K22X actually initiates the RLS signal (Fig. 3). The output of limiter ID32 is added to the sensed level signal (either single element or three element as selected by the operator). This adds 24 inches to the sensed level signal input to the Master Feedwater Controller; thus, reactor water level will be maintained 24 inches below the setpoint selected on the Master Feedwater Controller. Assuming a normal setpoint of 160 inches TAF, the RLS mode will control level at 136 inches TAF. Three conditions must exist before the RLS may be reset: 1) the low water level condition must be cleared (ID91 reset); 2) the Master Feedwater Controller must be in manual (ID66 contact); and 3) the reset pushbutton ID35 must be depressed. The requirement to have the Master Feedwater Controller in manual is to assure that a step increase in the automatic mode output does not occur when the RLS logic is reset. The operator must also ensure the controller is balanced prior to shifting it to manual.

2. Feedpump Runout Protection

Runout protection is actuated by high feed string flow, at 2.67×10^6 lbm/hr (same as present setpoint). On Fig. 4, this will close the ID92 contact, and energize the K11 relay. This relay seals itself in and energizes K11B and K11C. Relay K11B has a time delay of one (1) second before its contact closes to ensure the runout protection initiation is sealed in before making reset possible.

Relay K11C does several things; 1) it energizes relay K11X, which gives the amber RUNOUT indication on 5F and bypasses the loss of signal contact for feed regulating valve (FRV) lock-up; 2) disconnects the signal input from the bias M/A station (ID15) to the FRV and connects the output of flow controller ID86 to the FRV (Fig. 5); and 3) it opens a contact in the K11 path to prepare for resetting the runout condition.

The FRV is now being positioned based upon the output of the flow controller ID86. This controller receives the compensated feed flow signal (for the appropriate feed string), and an input from the runout flow setpoint controller ID87. The final result is the FRV will be positioned to maintain that string's feed flow at the runout setpoint (2.67×10^6 lbm/hr).

Reset occurs automatically when the output of the bias M/A station (ID15) is less than the output of flow controller ID86. This would mean that the ID15 signal is wanting to close the valve from the present position of maintaining 2.67×10^6 lbm/hr. Difference alarm ID95 monitors the signals from ID15 and ID 86 and closes a contact in the runout protection circuitry (Fig.4) which energizes relay K14. Relay K14 deenergizes K11, which then drops out relays K11B (instantaneous) and K11C (two second time delay). The time delay on K11C is to ensure the condition is reset before placing the ID92 signal (runout flow signal) back in the circuit. This prevents false reinitiation of the runout circuit due to spurious ID92 actuations from electrical noise.

When relay K11C drops out, it also deenergizes relay K11X. This clears the RUNOUT warning light on SF and removes the bypass around the loss of signal contact for FRV lock-up. Relay K11C also removes the ID86 signal to the FRV and reconnects the ID15 signal (bias M/A station signal).

III. OPERATIONS

A. Normal Operation

The RLS circuitry has no effect on normal power operation, as the initiating signals are a full scram condition and a low water level in the vessel. The runout protection circuitry should also have no effect on normal operation, since feed flow is typically less than the runout setpoint. Should an individual feed string (which is running close to the setpoint already) bounce or spike up to the setpoint, the circuitry will operate as designed and no operator action is necessary. Also note that except for the amber RUNOUT warning light the operator receives no indication the runout protection circuitry has initiated (no annunciator alarms).

B. Transient Operations

The RLS circuitry and the runout protection circuitry will normally operate together to control vessel level during a reactor scram, which is the transient the system was designed for.

6. PLANT SYSTEMS AND PLANT-WIDE GENERIC RESPONSIBILITIES

QUESTION 6.15 (1.00)

Considering the fire protection systems:

What signals will automatically start the diesel fire pump 1-2? Give setpoints where applicable.

ANSWER 6.15 (1.00)

1. 85 +/- 10 psig fire main pressure (0.5)
2. Loss of AC power (0.5)

REFERENCE

OCNGS Licensed Operator Exam Bank, Item Code 2-119

KA 286000K402(3.5)
286000K402 ..(KA's)

FACILITY COMMENT:

Should accept loss of control power as sensed at 1B2A because this is what starts the diesel on a loss of ac power.

FACILITY JUSTIFICATION:

OPM Module 19

See attached OPM 19-59, Rev. 0

The fire pumps will not start unless both control switches are out of PULL-TO-LOCK.

2. Interlocks

a. Diesel Fire Pump

Diesel Fire Pumps 1-1 and -2 automatically start whenever the pump control switches are in AUTO and Fire Suppression Water System pressure decreases to 75 and 85 psig respectively or if AC power to lighting panel 1B2A is lost.

The diesel fire pumps automatically shut down after automatic starts with a 15-minute time delay if the control switches are left in AUTO.

Diesel fire pump shutdowns are delayed 15 minutes after manual starts. The time delay begins when the pump control switch is placed in AUTO.

The diesel fire pumps shut down immediately if the control switches are placed in OFF.

QUESTION 6.16 (2.00)

With regards to the Main Steam Line (MSL) radiation monitor system:

What four (4) automatic actions occur on a MSL high-high trip function? Specific component numbers are not required. (2.00)

ANSWER 6.16 (2.00)

1. Off-gas isolation (0.50)
2. MSL isolation (0.50)
3. Rx Scram (0.50)
4. Trips vacuum pump (0.50)

REFERENCE

OCNGS Alarm Response Proc. J-1-b, Rev. 13

OCNGS OPM 04, p. 28

OCNGS Licensed Operator Exam Bank, Item Code 3-30

KA 272000K101(3.8) 272000K402(4.1) 272000G007(3.5)
272000K402 272000G007 272000K101 ..(KA's)

FACILITY COMMENT:

Should accept V-7-31 closes in lieu of off-gas isolation since this is the valve that closes on this isolation.

FACILITY JUSTIFICATION:

OPM 04

See attached 2000-RAP-3024.03

Group Heading		
MAIN STEAM		J-1-b

(RED)

RxI

RAD
HI-HI I
AND

6.16

CAUSES:	SETPOINTS:	ACTUATING DEVICES:
Radiation levels as detected at the main steam lines 10 x normal background at power. Trip signal to Reactor Protection System I.	600 ± 100 units	RN06A and RN06B

Reference Drawings:

GE 846D686, Sheet 2
GE 237E566, Sheet 1

CONFIRMATORY ACTIONS:

For half scram signal check the main steam radiation level at Panel 10F and 1R/2R.

AUTOMATIC ACTIONS:

Reactor scram, reactor isolation, closes V-7-31, V-7-29 and trips vacuum pump with coincidental Channel II trip. Also, recombiner inlet valves AOV 001A & B close.

NOTE: If AOG is on-line, V-7-31 will already be closed.

MANUAL CORRECTIVE ACTIONS:

For erroneous or spurious trip, reset the half scram. For a full scram condition, refer to Procedure ABN-3200.01, "Reactor Scram".

This alarm indicates that a parameter has exceeded or has the potential to exceed an Emergency Action Level (EAL). Enter Emergency Plan Implementation Procedure #1, Classification of Emergency Conditions. EAL - Radiological Effluent Release

2175P/11

QUESTION 6.18 (1.00)

The reactor is operating at 100% and a full flow surveillance on the Core Spray system is in progress. The CS system is recirculating water back to the torus when a low-low vessel water level signal is received.

How do the test-to-torus valve and the CS discharge valve respond, initially, to this signal?

a. The test-to-torus valve will remain open and the CS discharge valve will remain closed

b. The test-to-torus valve will go closed and the CS discharge valve will remain closed

c. The test-to-torus valve will remain open and the CS discharge valve will go open

d. The test-to-torus valve will go closed and the Cs discharge valve will go open

ANSWER 6.18 (1.00)

b (1.00)

REFERENCE

OCNGS OPM Module 10 Core Spray System pp. 19-23

OCNGS LO TCR 828.10 E

KA 209001K408(4.0) 209001K407(3.0) 209001A108(3.2) 209001A301(3.6)
209001K408 209001K407 209001A301 209001A108 ..(KA's)

FACILITY COMMENT:

Comment Withdrawn.

6. PLANT SYSTEMS AND PLANT-WIDE GENERIC RESPONSIBILITIES

QUESTION 6.20 (1.00)

COMPLETE the following:

a. In accordance with Technical Specifications, a fire brigade of at least _____ members shall be maintained on-site at all times. (0.5)

b. In accordance with Administrative Procedure 101.2, "Fire Protection Organization, Responsibilities and Controls", each fire brigade leader shall perform at least _____ fire drill(s) per year. (0.5)

ANSWER 6.20 (1.00)

a. five (0.5)
b. one (0.5)

REFERENCE

OCNGS T.S. 6.2.2.g

OCNGS Admin. Proc. 101.2, 4.14.7

KA 294001K119(3.8)

294001K119 ..(KA's)

FACILITY COMMENT:

(b.) in accordance with Administrative Procedure 101.2 the Fire Protection Instructor is responsible to ensure all Fire Brigade Members are fully qualified and the GSS only responsibility is to use fully qualified members on the Fire Brigade. Therefore, this part of the question should be dropped.

FACILITY JUSTIFICATION:

Administrative Procedure 101.2

Admin. Proc. 106, Sec. 3.6 (NOTE: 3.6.9) and Sec. 3.7

Admin. Proc. 101.2, Sec. 4.14.2

QUESTION 6.21 (1.00)

Which of the following is NOT an acceptable reason for defeating an alarm circuit? (1.00)

a. Malfunctioning alarm

b. Alarm due to equipment tagged out-of-service

c. Known alarm condition which has the potential to mask additional alarm conditions

d. Known recurring alarm condition which may distract from other alarm conditions

ANSWER 6.21 (1.00)

d. (1.00)

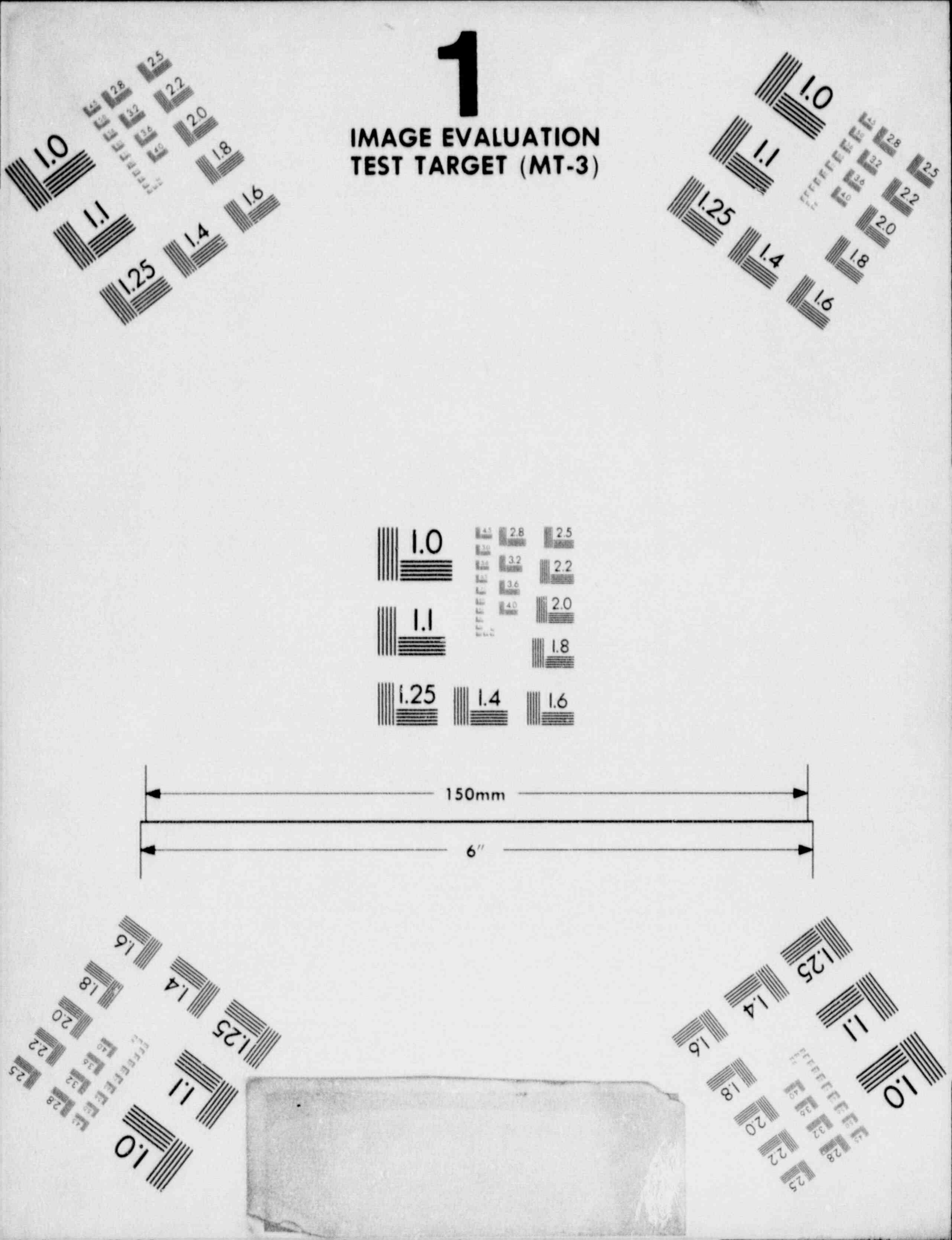
REFERENCE

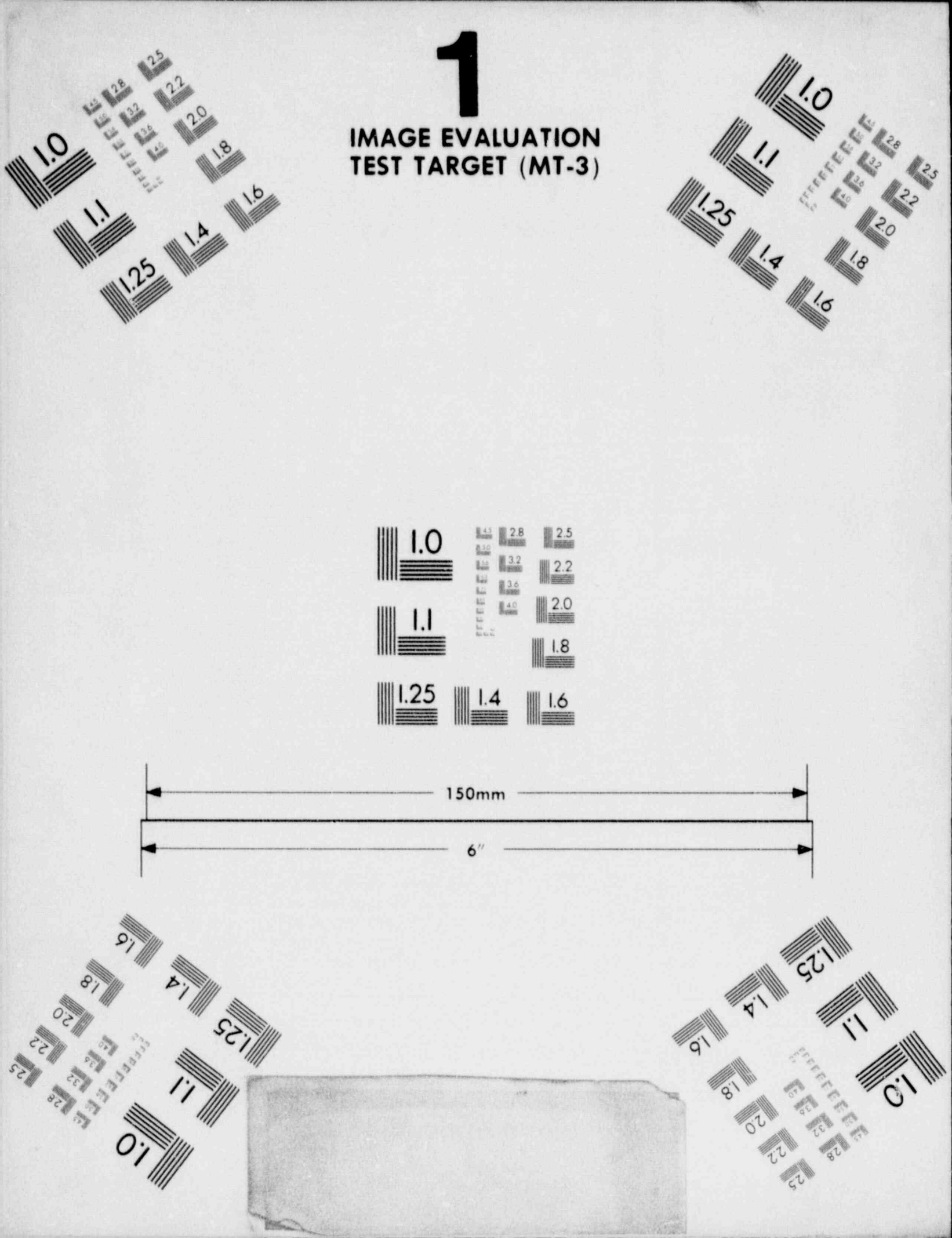
OCNGS TCR 830.01 I.11

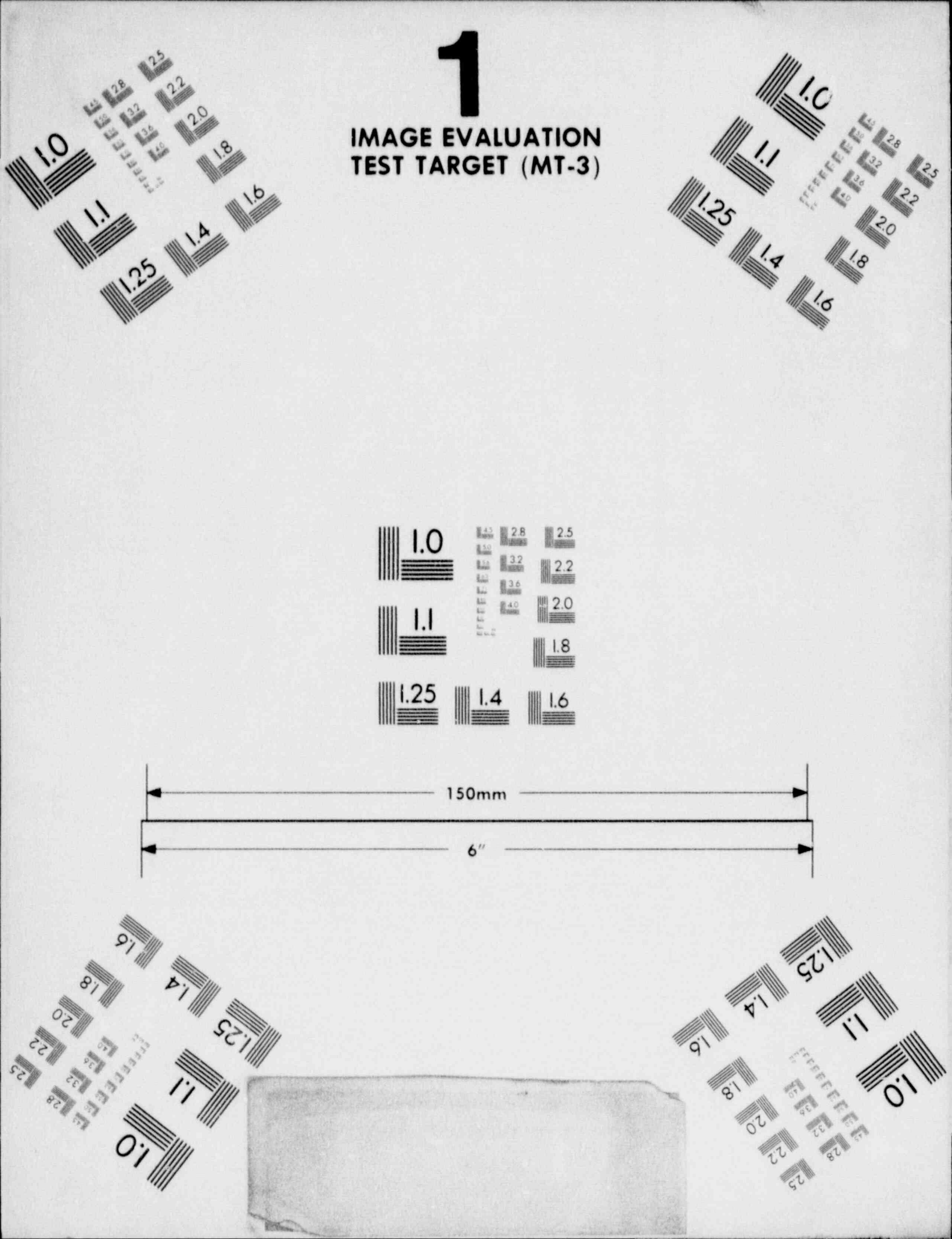
OCNCS Admin. Proc. 108, Rev. 45, 07/16/89, p. 90, 7.2.3

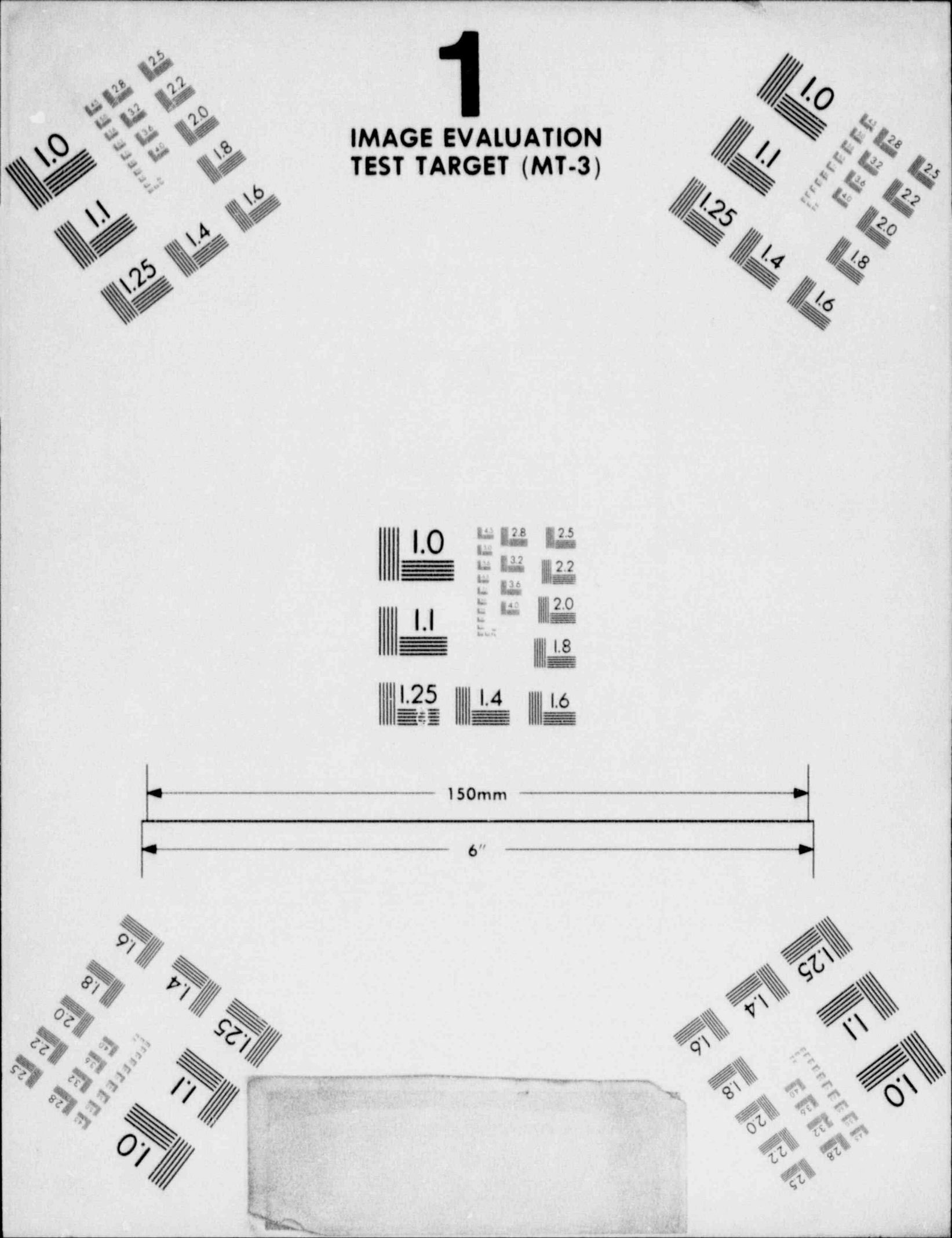
KA 294001K102(4.5)

294001K102 ..(KA's)


1
IMAGE EVALUATION
TEST TARGET (MT-3)
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
150mm
6"


1
IMAGE EVALUATION
TEST TARGET (MT-3)
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
150mm
6"


1
IMAGE EVALUATION
TEST TARGET (MT-3)
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
150mm
6"


1
IMAGE EVALUATION
TEST TARGET (MT-3)
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
150mm
6"

FACILITY COMMENT:

This question has no correct answer since Standing Order #40 allows an operator to bypass a CRD High Temp alarm if it is distracting from other alarm conditions. Should either delete question or accept (a) or (d) since (a) would require more investigation before the CSS could bypass the alarm.

FACILITY JUSTIFICATION:

OCNGS Standing Order #40

QUESTION 6.25 (1.00)

Concerning a Drywell entry for a 1000 psig inspection with the reactor at less than 10% power:

Which one of the following conditions is intended to ensure that reactor power is maintained less than 10%? (1.00)

a. Level is controlled between 150 and 170 inches above TAF

b. Recirculation flow is minimized

c. Main Turbine Bypass valves are closed

d. IRMs are limited to Range 10

ANSWER 6.25 (1.00)

c. (1.00)

REFERENCE

OCNGS General Plant Operating Procedure 233, "Drywell Access and Control", Rev. 16, 05/22/89, pp. 8.0-9.0

OCNGS Licensed Operator Exam Bank, Item Code 4-93

KA 294001K105(3.7)
294001K105 ..(KA's)

FACILITY COMMENTS:

Should accept a or c since the procedure does require this level band to minimize pressure and power transients.

FACILITY JUSTIFICATION:

General Operating Procedure 233

6. PLANT SYSTEMS AND PLANT-WIDE GENERIC RESPONSIBILITIES

QUESTION 6.26 (2.00)

Fill in the blanks below to describe Admin. Procedure 106, "Conduct of Operation", limitations on overtime.

1. An individual should not be permitted to work more than _____(a) hours straight. (0.25)

   An individual should not be permitted tow work more than _____(b) hours in any 24 hour period, not more than _____(c) (0.50)
   hours in any 48 hour period, nor more than _____(d) hours in any 7 day period. (0.25)

2. Deviation from the guidelines must be authorized by the _____(a), or higher level of Management, and logged in the (0.50)

   _____(b) log to describe the circumstances that prevailed. (0.50)

ANSWER 6.26 (2.00)

1. a. 16 (0.25)
   b. 16 (0.25)
   c. 24 (0.25)
   d. 72 (0.25)

2. a. Plant Operations Director (P.O.D.) (0.50)
   b. Group Shift Supervisor (G.S.S.) (0.50)

REFERENCE

OCNGS Admin. Proc. 106, p. 69

OCNGS Licensed Operator Exam Bank, Item Code 8-72

KA 294001A103(3.7)
294001A103 ..(KA's)

FACILITY COMMENT:

2.6 credit should be given for Control Room Log since this log must show all Tech Spec deviations and their reasons.

FACILITY JUSTIFICATION:

Administrative Procedure 106

Admin. Proc. 106, Sec. 4.4.10

Attachment 3

NRC Response To Facility Comments

RESOLUTION OF FACILITY COMMENTS ON THE

SRO WRITTEN EXAMINATION ADMINISTERED AT

OYSTER CREEK ON OCTOBER 11, 1989

SECTION 5

5.01 Disagree. This was discussed during the pre-examination review and the decision was made that the correct answer was (a), not (b). This was one of the reasons 'immediate' was underlined. The correct answer is (a).

5.03 Agree. For parts 4 and 5, (e) or (g) will be accepted as correct answers. For part 6, (b) or (f) will be accepted as correct answers.

5.06 Disagree. The question states 'decreasing slowly' indicating that an automatic scram is neither imminent nor inevitable. The correct answer is (b).

5.08 Disagree. While the EDG may auto start it will definitely not idle at 450 rpm, therefore (b) is clearly incorrect. The correct answer is (a).

5.14 Disagree. The question states that this is an 'unexplained increase in reactor power', furthermore the question clearly refers to the crosshatched area of the power flow map and does not refer to an unexplained criticality. The correct answer is (b).

5.17 Conditionally agree. Answers consistent with the intent of the precaution will be given credit provided they are sufficiently specific.

Example: 'Gross fuel failure' - will accept 'High main steam line radiation conditions' not simply 'High radiation conditions'

5.20 Disagree. This question was discussed and accepted during the pre-examination review. Procedure 9473-IMP-1300.33, 'Core Damage Estimation', at step 5.11.2.2 on page 13.0, under section 5.11.2, 'Containment High-Range Radiation Monitor System (CHRRMS)', states 'This method is not valid if venting has taken place or if containment spray has been initiated.' Therefore, (c) is incorrect. The correct answer is (b).

MKH 10/30/89

5.21 Conditionally agree. Terms other than the exact words listed will be accepted provided they are sufficiently specific.

Example: 'Primary Containment' vice 'D.W.' not simply 'Containment'

5.25 Agree. However, the correct answers must be provided somewhere in the candidate's response. Furthermore, proportional grading will be applied should any incorrect additional information be provided.

5.31 Agree. Answers consistent with candidates' assumptions will be considered provided the assumptions are relevant and valid.

5.35 Disagree. ODNGS TCR 801.01, Lesson 801.01, on page 42 states that the basis for not restoring power is to 'Prevent explosion'. Answer (a) applies to the sequence in which to restore power but is not related to the condition given in the question that 'USS-1E1 was deenergized for more than 6 hours'. The correct answer is (c).

MKH
10/30/91

SECTION 6

6.09 Disagree. Since the alarm is, in fact, operable in RUN, the correct answer will be changed to (b). Credit will not be given for (a).

6.11 Agree. A description of the actual operation of the appropriate instrumentation will be accepted.

6.15 Agree. For 'Loss of AC power', 'loss of control power as sensed at 1B2A' or 'loss of AC power to lighting panel 1B2A' will be accepted and given 0.5 points credit.

6.16 Partially agree. The question stated that specific component numbers were not required. V-7-31 (Off Gas Isolation/AOG System Bypass) closes on this isolation; however, the procedure also indicates that V-7-29 (Off Gas Delay Pipe Drain) closes. Therefore, 0.25 points credit will given for each valve.

6.18 Facility comment withdrawn.

6.20 Agree. Part b will deleted as not all senior licensed operators nor licensed operators are necessarily trained as fire brigade leaders.

6.21 Disagree. Answer (a) would not require further investigation as it states the alarm IS malfunctioning, not that a determination of whether it is malfunctioning is required. Standing Order 40, 'CRD High Temperature Alarm Bypassing' applies to bypassing inputs to a single alarm, 'CRD HI TEMP (H-5-c)', and appears to actually be based on the reason given as answer (c). The correct answer is (d).

6.25 Disagree. Maintaining level between 150 and 170 inches above TAF may minimize pressure and power transients but does not specifically 'ensure that reactor power is maintained less than 10%.' The correct answer is (c).

6.26 Disagree. Administrative Procedure 106, Section 4.4.10, regarding the minimum items to be recorded in the Control Room Log does not require the recording of ALL Tech Spec deviations. Only equipment-related deviations are required to recorded in the Control Room Log. Credit for part 2.b will only be given for the 'Group Shift Supervisor (GSS) Log.

MHH